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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,789	12/05/2001	Chien-Shih Hsu	BHT-3111-218	2271

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EXAMINER

EDWARDS, ANTHONY Q

ART UNIT PAPER NUMBER

2835

DATE MAILED: 09/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/001,789

Applicant(s)

HSU, CHIEN-SHIH

Examiner

Anthony Q. Edwards

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 7, 8, 10, 11, 13-15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14, 15 and 17-20 is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 10, 11 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☒ Interview Summary (PTO-413) Paper No(s). 5.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_. 6) ☒ Other: *See Continuation Sheet*.

Continuation of Attachment(s) 6). Other: Statement of Reasons for Allowance.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,874,696 to Hayashi et al in view of U.S. Patent No. 6,137,676 to Merkel. Referring to claim 1, Hayashi et al. disclose an elevated and lower key structure for a keyboard apparatus, comprising: a key-top-lid (125), a base (522), and a scissors-device (124d) having a first connection rod and a second connection rod (531). See Figure 6 and the corresponding specification.

Hayashi et al. also disclose a guiding block (523b) installed on the base (522) in a moveable manner, and movable between a first position and a second position, wherein when the guiding block is moved from the second position toward the first position, the guiding block presses upon the second connection rod to make the key-top-lid move downward relative to the base, and when the guiding block is moved from the first position toward the second position, the guiding block releases the second connection rod enabling the key-top-lid to move upward relative to the base. See Figures 2, 6 and the corresponding specification.

Hayashi et al. does specifically disclose the scissors-device having the first connection rod and the second connection rod each having an upper end, a lower end and a middle section, wherein the upper ends are connected to the key-top-lid, the lower ends are connected to the

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base, the middle sections are pivotally connected between the upper ends and the lower ends, and the key-top-lid being movable in an upward and downward manner relative to the base through the scissors-device.

Merkel teaches providing a scissors-device for an elevated and lower key structure having a first connection rod and a second connection rod, each having an upper end, a lower end and a middle section, wherein the upper ends are connected to the key-top-lid, the lower ends are connected to the base, the middle sections are pivotally connected between the upper ends and the lower ends, and the key-top-lid being movable in an upward and downward manner relative to the base through the scissors-device. See Figure 3 and column 4, lines 55-59.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the scissors device of Hayashi et al. to include scissored support arm linkages or rods having pivotally connected middle sections portions for raising and lowering the key structure, as taught by Merkel, since the device of Merkel would eliminate the complicated gear/tooth structure of Hayashi et al. and allow for easier manufacturing.

Referring to claim 2, Hayashi et al. in view of Merkel disclose the key structure for a keyboard apparatus of claim 1, further comprising an elastic body (122'), installed between the base (522) and the key-top-lid (125), such that when the guiding block (523b) releases the second connection rod, through an elastic force of the elastic body, the elastic body moves the key-top-lid upward relative to the base. See column 7, lines 39-42 of Hayashi et al.

Referring to claim 3, Hayashi et al. in view of Merkel disclose the key structure of claim 1, further comprising a guiding board (523) installed on the base, wherein the guiding block (523b) installed on the guiding board, so as to be horizontally moveable between the first

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position and the second position relative to the base. See FIGS. 2 and 6 and column 11, lines 57-61 of Hayashi et al.

Referring to claim 4, Hayashi et al. in view of Merkel discloses the key structure for a keyboard apparatus of claims 1, further comprising the guiding board (523) installed under the base (522), wherein the guiding block (523b) installed on the guiding board, an opening (522b) formed in the base (522) into which the guiding block is inserted. See Fig. 2 of Hayashi et al. Fig. 2 also shows the guiding block passes through from the opening and protruding upwardly through the base, and the guiding board horizontally movable the first position and second position relative to the base.

***Allowable Subject Matter***

Claims 7, 8, 10, 11 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: the instant application, recited in claims 7 and 14, is deemed to be directed to a nonobvious improvement over the invention patented in U.S. Patent No. 5,874,696. The improvement comprises a first guiding block and a second guiding block 141 formed on the guiding board 14, the first *and* second guiding blocks press upon the second connection rod 122 to make the key-top-lid move downward relative to the base.

These features, in combination with the rest of the elements or steps, are not taught or suggested by the prior art references. Claims 8, 10, 11 and 13 depend, either directly or indirectly, from claim 7 and are therefore allowable for at least the reasons provided above.

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Claim 14 is allowed for the reasons referred to above. Claims 15-20 depend, either directly or indirectly, from claim 14 and are likewise allowable for at least the same reasons provided above.

### ***Response to Arguments***

With respect to claims 1-4, applicant's arguments filed July 25, 2003 have been fully considered but they are not persuasive. Specifically, the teaching of lowering the key top by pulling, as opposed to pressing, a connection rod is not claimed. Likewise, movement by pressing or pulling is not of itself a patentable feature.

The remainder of applicant's arguments with respect to claims 1-4 has been considered but is moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Q. Edwards whose telephone number is 703-605-4214. The examiner can normally be reached on M-F (7:30-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (703) 308-4815. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-9929.

aqe  
September 9, 2003

  
DARREN SCHUBERG  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800